

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

80th IIRS Special Course

on

“Earth Observation for Carbon Cycle Studies”

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Indian Institute of Remote Sensing, Dehradun***

21 – 25 June, 2021

The Department of Electronics and Communication Engineering has organized a 5-Day Outreach Programme conducted by Indian Institute of Remote Sensing, Dehradun during 21 – 25 June, 2021. The target audience are the faculty and students of various disciplines of Sree Vidyanikethan Educational Trust, Tirupati.

Natural forests and well managed agroecosystems are major of atmospheric carbon in Terrestrial Biosphere. Accurate quantification of carbon fluxes of forest and agro ecosystems at local, regional and global scales is utmost important for understanding the feedback mechanism between the terrestrial biosphere and the atmosphere. Hitherto, a quantum of research works executed to ascertain the carbon status of vegetation/soil and advanced carbon accounting of natural and managed ecosystems on seasonal/annual scale over varied climate regimes. In present context, Earth Observation satellites operated in optical/thermal and microwave domains with frequent revisit and improved spatial resolution providing periodic monitoring of vegetation biomass carbon and ecosystem scale carbon exchanges GPP/ with ground validation using covariance towers for informed decision making on carbon management, region policy on carbon emission targets and input to national climate change programs. Furthermore, availability of new airborne sensors, unmanned aerial vehicle (UAV sun induced fluorescence sensors supported with in situ observation and process based models are providing newer dimensions to precise carbon cycle studies and geospatial carbon accounting using earth observation sensors.

Following topics will be covered in this course

- Role of EO in Carbon Cycle Assessment Status, Challenges and Issues
- Measuring Ecosystem Carbon Exchange Observational network, Instrumentation and advanced sensors
- Up scaling and Modeling of Carbon fluxes Remote Sensing and Process based modeling
- Earth Observation and its role in Vegetation Carbon Pool Assessment
- Earth Observation and its role in Soil Organic Carbon Assessment

Finally, on 25.06.2021, a panel discussion with all the mentors is conducted for interaction with the participants. Four participants have attended this programme.

Dr. V. V. Satyanarayana Tallapragada, Associate Professor has coordinated this event under the guidance of Dr. N. Gireesh, Professor and Head, Department of Electronics and Communication Engineering.